

CLAIMS

1. A β -glucan derivative having a β -glucan residue of three or more glucose residues and a non-reducing sugar residue chemically bound to the β -glucan residue.
2. The β -glucan derivative according to Claim 1 having 3 to 1000 glucose residues.
3. The β -glucan derivative according to Claim 1 or 2 having 3 to 450 glucose residues.
4. The β -glucan derivative according to any one of Claims 1 to 3 having 40 to 450 glucose residues.
5. The β -glucan derivative according to any one of Claims 1 to 3 having 3 to 39 glucose residues.
6. The β -glucan derivative according to any one of Claims 1 to 4 having 40 to 450 glucose residues, characterized in that the β -glucan derivative is used as an additive for pharmaceuticals and foods.
7. The β -glucan derivative according to any one of Claims 1 to 3 and 5 having 3 to 39 glucose residues, characterized in that the β -glucan derivative is used as an additive for pharmaceuticals and foods.
8. The β -glucan derivative according to any one of Claims 1 to 7, wherein the non-reducing sugar is a fructosyl group.
9. The β -glucan derivative according to any one of Claims 1 to 8, wherein a chemical bond between the β -glucan residue and the non-reducing sugar residue is an ether bond or an ester bond.

10. The β -glucan derivative according to any one of Claims 1 to 9, wherein a chemical bond between the β -glucan residue and the non-reducing sugar residue is an ether bond.
11. The β -glucan derivative according to any one of Claims 1 to 10, wherein the β -glucan derivative is powder at ordinary temperature and pressure.
12. A β -glucan derivative having three or more glucose residues produced by chemically binding a non-reducing sugar to a reducing end.
13. The β -glucan derivative according to Claim 12 having 3 to 1000 glucose residues produced by chemically binding a non-reducing sugar to a reducing end.
14. The β -glucan derivative according to Claim 12 or 13 having 3 to 450 glucose residues produced by chemically binding a non-reducing sugar to a reducing end.
15. The β -glucan derivative according to any one of Claims 12 to 14 having 40 to 450 glucose residues produced by chemically binding a non-reducing sugar to a reducing end.
16. The β -glucan derivative according to any one of Claims 12 to 15 having 3 to 39 glucose residues produced by chemically binding a non-reducing sugar to a reducing end.
17. The β -glucan derivative according to any one of Claims 12 to 15 having 40 to 450 glucose residues

produced by chemically binding a non-reducing sugar to a reducing end, characterized in that the β -glucan derivative is used as an additive for pharmaceuticals and foods.

18. The β -glucan derivative according to any one of Claims 12 to 14 and 16 having 3 to 39 glucose residues produced by chemically binding a non-reducing sugar to a reducing end, characterized in that the β -glucan derivative is used as an additive for pharmaceuticals and foods.

19. The β -glucan derivative according to any one of Claims 12 to 18, wherein the non-reducing sugar is a fructosyl group.

20. The β -glucan derivative according to any one of Claims 12 to 19, wherein a chemical bond between the β -glucan residue and the non-reducing sugar residue is an ether bond or an ester bond.

21. The β -glucan derivative according to any one of Claims 12 to 20, wherein a chemical bond between β -glucan residue and non-reducing sugar residue is an ether bond.

22. The β -glucan derivative according to any one of Claims 12 to 21, wherein the β -glucan derivative is powder at ordinary temperature and pressure.

23. A pharmaceutical or food composition comprising the β -glucan derivative according to any one of Claims 1 to 22 and at least one active ingredient.

24. A process for producing the β -glucan

derivative according to any one of Claims 1 to 23 comprising providing the β -glucan according to any one of Claims 1 to 23 and sucrose as substrates and allowing an enzyme to transglucosylate a fructosyl group in said sucrose to said β -glucan.

25. The process for producing the β -glucan derivative according to any one of Claims 1 to 24, wherein the enzyme for use in the transglucosylation is β -fructofuranosidase.